



PATENT ABSTRACTS OF JAPAN

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(21) Application number: **08216583**(71) Applicant: **SUMITOMO SITIX CORP**(22) Date of filing: **29.07.96**(72) Inventor: **FUJIKAWA TAKASHI**
**(54) SILICON WAFER AND MANUFACTURE
THEREOF**
(57) Abstract:

PROBLEM TO BE SOLVED: To obtain a produce having an improved getting power against various contamination in the device process, without applying any treatment to provide the EG effect by forming an epitaxial film on the surface of a wafer having an oxygen carbon concns. within specified ranges to simplify the process.

SOLUTION: A wafer made of a single crystal grown by the CZ method has an O concn. of

$12-27 \times 10^{17}$ atoms/cm³ and C concn. of $0.5-32 \times 10^{16}$ atoms/cm³. An epitaxial layer is formed on wafer surface which is not processed at all for providing the EG effect. When, e.g. a Si single crystal ingot is pulled up at the O and C concns. controlled in a predetermined ranges by the CZ method and sliced into Si wafers. Each or one side of the wafer is polished into a mirror surface, without applying any process for providing the EG effect, and epitaxial layer is formed by the chemical vapor deposition on a predetermined surface.

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